

Patent claims

1. A plastic closure comprising a lower part and a cap and a snap hinge via which the two closure parts are connected to one another as one piece, wherein the lower part and the cap may be manufactured in the closed state and additionally connected to one another via at least one separation seam, characterised in that all elements of the snap hinge lie in the lateral wall (skirt) regions of the closure which run parallel to the closing and opening movement direction of the injection mould.
2. A plastic closure according to claim 1, characterised in that the lateral walls of the lower part and the cap are arranged lying on top of one another in a flush manner at least in the region of the snap hinge.
3. A plastic closure according to claim 1, characterised in that the lateral walls of the lower part and cap lie on top of one another in a completely flush manner.
4. A plastic closure according to claim 3, characterised in that the lateral walls of the lower part and the cap on the outer surface are free of inward formations or outward formations, and the inner surfaces comprise inward formations and/or outward formations which do not exceed the wall thickness of the lateral walls.
5. A plastic closure according to claim 3, characterised in that the lateral walls of the lower part and the cap on the inner surface are free of inward formations or outward formations, and the outer surfaces have inward formations and/or outward formations which do not exceed the wall thickness of the lateral walls.
6. A plastic closure according to claim 1, characterised in that the lower part and the cap are connected to one another via two separation seams which delimit a guarantee strip, wherein the two separation seams proceeding from a lateral limitation of the snap hinge run around the closure up to at least approximately the other lateral limitation of the snap hinge.
7. A plastic closure according to claim 6, characterised in that the two separation seams run parallel to one another.
8. A plastic closure according to claim 6, characterised in that the two separation seams run in two planes which run perpendicular to the centric middle axis of the closure.
9. A plastic closure according to claim 6, characterised in that the two separation seams run in planes which run inclined to the centric middle axis of the closure.

10. A plastic closure according to claim 6, characterised in that the two separation seams run in planes which run differently inclined to the centric middle axis of the closure.

11. A plastic closure according to claim 1, characterised in that the snap hinge is formed of two film hinges which from one lateral limitation to the other limitation of the snap hinge assume such a course that they centrally approach one another or run apart (diverge).

12. A plastic closure according to claim 11, characterised in that the two film hinges at the middle contact one another at least approximately and assume a curved course or one running with a sharp bend, wherein they laterally enclose two lateral intermediate elements transmitting tensile forces.

13. A plastic closure according to claim 11, characterised in that the lateral limitations of the intermediate elements are separated from the lateral walls by a gap.

14. A plastic closure according to claim 11, characterised in that the lateral limitations of the intermediate elements are connected to the adjacent lateral walls by separation seams, wherein these separation seams tear on opening for the first time.

15. An injection mould for manufacturing plastic closures according to one of the claims 1-14, consisting of two plates of which the one plate comprises the cores, and the other plate the cavities, characterised in that at least one of the plates on the surfaces parallel to the extension direction of the plate is free of recesses or protuberances.

16. An injection mould according to claim 15, characterised in that the mandrels on the one plate in the surfaces parallel to the extension direction comprise protuberances and/or recesses, whilst the plate comprising the cavities, on the surfaces lying parallel to the extension direction is free of recesses or protuberances.

17. An injection mould according to claim 15, characterised in that the cavities in the surfaces parallel to the extension direction comprise recesses or protuberances, whilst the surfaces of the mandrels parallel to the extension direction are free of protuberances or recesses.

18. A method for manufacturing the closure according to one of the claims 1-14 whilst using the injection mould according to one of the claims 15-17, characterised in that firstly that plate which comprises mandrels or cavities with surfaces parallel to the extension direction which are free of recesses or protuberances is extended, whereupon then the closures which are [set] free at one side are ejected from the other plate.

19. A method according to claim 18 using the injection mould according to claim 16, characterised in that firstly the plate comprising the cavities is retracted and thereafter the cores are pulled from the closures.

20. A method according to claim 18 using the injection mould according to claim 17, characterised in that firstly the cores are pulled from the closures and thereafter the closures are ejected.